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University Faculty, Colleagues and Teachers' Federation as Mentors in Collaborative Action Research

Les membres d'une faculté, les collègues et une fédération d'enseignement comme mentors dans une action de recherche collaborative

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Mentoring: Promoting learning in collaborative communities
Mentorat : promouvoir l'apprentissage au sein de communautés collaboratives

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Résumé de l'article

Cet article fait le compte-rendu de projets de recherche collaborative soutenus par une fédération d'enseignants. Nous y comparons l'expérience de l'équipe de chercheurs impliqués dans la première année du projet – lesquels ont eu libre choix quant à leurs objectifs de recherche – à celle de la seconde cohorte de chercheurs, devant travailler avec des objectifs déjà définis. Des membres de la faculté universitaire, des collègues enseignants ainsi que la fédération des enseignants ont agi à titre de mentors auprès des participants. L'action de recherche a eu pour résultantes des changements de la pratique enseignante et le développement d'habiletés de leadership.

UNIVERSITY FACULTY, COLLEAGUES AND TEACHERS' FEDERATION AS MENTORS IN COLLABORATIVE ACTION RESEARCH

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ABSTRACT. This research reports on collaborative research projects supported by a teachers' federation. We compare research teams involved in the first year of the project, where they had free choice of research purposes with those in the second year who had the subject area defined for them. University faculty, teachers' colleagues, and the teachers' federation served as mentors for participating teachers. The action research resulted in change in teachers' practice and in the development of leadership skills.

LES MEMBRES D'UNE FACULTÉ, LES COLLÈGUES ET UNE FÉDÉRATION D'ENSEIGNEMENT COMME MENTORS DANS UNE ACTION DE RECHERCHE COLLABORATIVE

RÉSUMÉ. Cet article fait le compte-rendu de projets de recherche collaborative soutenus par une fédération d'enseignants. Nous y comparons l'expérience de l'équipe de chercheurs impliqués dans la première année du projet – lesquels ont eu libre choix quant à leurs objectifs de recherche – à celle de la seconde cohorte de chercheurs, devant travailler avec des objectifs déjà définis. Des membres de la faculté universitaire, des collègues enseignants ainsi que la fédération des enseignants ont agi à titre de mentors auprès des participants. L'action de recherche a eu pour résultantes des changements de la pratique enseignante et le développement d'habiletés de leadership.

In much of the research on mentoring teachers to improve professional practice, the mentors have been associate teachers or instructors of teacher education courses working with teacher candidates in university teacher education courses or practicum settings (e.g., Cherian, 2007; Feiman-Nemser, 2001; McCann & Johannessen, 2009; Walkington, 2005; Wang & Odell, 2002). The goals of these mentoring efforts have primarily been to foster and maintain teacher candidates' positive views toward teaching and of themselves as teachers, and to help teacher candidates adapt to school culture and norms of teaching. Underpinned by social constructivist theory (Bruner, 1990; Vygotsky, 1986), research on teacher mentoring is understood to involve a relationship between a more experienced teacher and a novice teacher. Through practices such as engaging in reflective, encouraging conversations on teaching experiences of

both teachers and providing access to classroom-tested materials and teaching practices, mentors scaffold the beginning teacher's professional learning. Novice teachers' professional growth is enhanced not only through adding materials and instructional methods to their teaching repertoires, but more importantly, through opportunities to make sense of their experience and develop their own theories and principles of effective practice in the reflective conversations with mentors.

Research on the mentoring of experienced teachers suggests that "the professional development of teachers can be improved through experimentation, observation, reflection, the exchange of professional ideas, and shared problem-solving" (Zwart, Wubbels, Bergen, & Bolhuis, 2007, p. 167). These practices underpin a widely practiced and researched context for mentoring experienced teachers, peer coaching (Gottesman, 2000; Weasmer & Woods, 1999; Zwart, Wubbels, Bergen, & Bolhuis, 2007). Peer coaching generally takes the form of pairing two teachers to plan together to implement instructional methods that are new to them, or to refine practices that they would like to improve. The teachers serve alternately as teacher coach and coached teacher. The paired teachers may observe each other's teaching and then give each other feedback, or if their schedules do not permit them to observe in each other's classrooms, they may take time to reflect together on their own teaching and discuss ways to improve their teaching.

Peer coaching is an element of the mentoring relationships created between experienced teachers in the *Teachers Learning Together* (TLT) initiative on which this report is based. Our research adds to existing research by showing how peer coaching, together with the mentoring of university faculty and teachers' federation staff to support experienced teachers' collaborative action research, contributes to teachers' professional growth. The purpose of this paper, thus, is to identify the types of mentoring that colleagues, university faculty and teachers' federation staff carried out in the TLT initiative and to identify the influence of the mentoring endeavors on teachers' professional learning. We synthesize observations of the professional learning of four teams who participated in the first year of the project and of three second-year teams, drawing conclusions about effective mentoring to support experienced teachers' learning.

THE TEACHERS LEARNING TOGETHER INITIATIVE

As part of the *TLT* initiative, which was funded by the Ontario Ministry of Education and administered through the Elementary Teachers' Federation of Ontario (ETFO), elementary teachers in Ontario, Canada were invited by ETFO, to submit proposals for collaborative action research in their schools in 2007-2008 and again in 2008-2009. Fifty teams participated in the first year of the program and 45 different teams participated in the second year.

With the goal of enhancing teachers' professional practice through collaborative action research, ETFO provided each teacher research team with four release days to work on their research and gave them a binder of information and templates for planning and carrying out action research (Elementary Teachers' Federation of Ontario, 2008). ETFO also organized a two-day professional learning session about action research, which all teams attended during the summer, prior to commencing the research. The teacher teams decided how the four release days would be used; they could be devoted to any purpose related to the action research: planning instructional innovation, observing colleagues as they carried out their new methods, planning and carrying out data collection and analysis, reading literature on their chosen topics, consulting with university facilitators, or writing the interim and final reports. Teachers sent their interim and final reports to the facilitators for feedback to enhance the learning potential of the action research and to ensure that requirements for the various sections of the reports were met.

In addition, ETFO recruited university faculty involved in initial teacher education from five faculties of education across the province of Ontario to work with teams of teachers to support their action research. University facilitators were required to hold four meetings with each of the teams for which they were responsible and were asked to be in e-mail or telephone contact with teams whenever they felt a need for consultation. University facilitators provided guidance and models for writing the research question, gathering resources to develop the teaching methods that teacher teams were examining, carrying out the data collection and analysis, and for writing ethics protocols.

In the first year of the initiative, each team was allowed to choose a research topic related to any aspect of the curriculum or professional development issues within the school. There was no formal recognition of a team leader to administer and facilitate the various stages of the research. Two changes were made in the second year of the TLT project. They included defining the parameters of the research focus more narrowly and identifying a team leader for each team. In the second year, there was a focus on mathematics instruction which arose from a need for professional development in the teaching of mathematics observed both by ETFO and the Ontario Ministry of Education. The project was renamed *Teachers Learning Together: The math journey*. This new initiative resulted in the addition of mathematics specialists to the university facilitators' teams.

Assessments of the efficacy of the first year of the TLT initiative revealed a need for a team leader for each team. The team leaders were the contact teachers for all communication between ETFO and the teams and between the university facilitators and the teams. In addition, the team leaders were responsible for ensuring that interim and final reports were submitted in a timely manner. They attended a half-day meeting in August before the two-

day in-service and a full-day meeting with their university facilitators in late March. The intent of this meeting was not only to begin the communication process but to provide teacher team leaders with information about how to work effectively in groups, how to handle conflict in a positive and productive manner and how to facilitate purposeful conversations.

COLLABORATIVE ACTION RESEARCH AND MENTORING

Capobianco (2007) characterizes collaborative action research as an investigation into classroom-based problems that are mutually defined by participating teachers and university researchers. Together with the development of competencies in data collection and analysis, the teachers and researchers work together in generating knowledge that will contribute to the collective knowledge of teaching and learning and to the improvement of their own teaching practices.

Action research provides teachers with opportunities to take charge of their own personal growth, empowering educators to be free thinkers and creators of their own change. The key difference between action research and other forms of professional development is the locus of ownership of the investigation. In action research initiatives, teacher-researchers choose the issues or concerns that they want to address – something that they believe is worth learning about – and take action with the goal of enhanced student learning. Teachers' professional practical knowledge (Connelly & Clandinen, 1999) is honored and teachers have autonomy in determining the direction of their professional learning.

McIntyre and O'Hair (1996) assert that action research enables educators to identify relevant areas of their own teaching that they wish to explore in order to bring about change in their instruction. As a result, there is a closer link between research and student learning in action research than there is in other forms of research. The "ongoing cycle of questions that promote deep team learning" in action research has the potential to affect student achievement directly (DuFour, 2004, p. 9).

Another feature particular to action research is the dialectic between practice and theory in the actual conduct of the investigation, as theory provides a framework for teachers' decision-making and for their systematic collection of data (Hubbard & Power, 1999). Action research provides opportunities for teachers to reflect on their practice. They come to a better understanding of themselves as teachers and colleagues, and make generalizations about principles and theories underpinning their practice, as a result.

The mentoring role of the researcher/facilitator is defined as one that should be "flexible and sensitive upon the context, needs and prerequisites of collaboration as well as on the changes occurring both in the facilitator as well as in the teacher researchers" (Avgitidou, 2009, p. 598). Given that the action

research focus is on shared ownership of the questions and methods, mentoring among teachers is not generally featured in the literature on collaborative action research. Yet, there is a mentoring aspect to collaborative action research, as it provides a forum for educators to learn with and from colleagues, to engage in systematic inquiry and critical reflection on effective practice; and to test their ideas in their classrooms with the support and encouragement of colleagues (Cotton, 2004; Huffman & Hipp, 2003; McNiff, 2001; Wang & Odell, 2002). Mentoring among colleagues in collaborative action research groups is usually spontaneous and informal. Colleagues may take up mentoring roles when they possess characteristics identified as effective in mentors: a deep subject matter understanding and an ability to teach the subject matter effectively using a thoughtfully-determined set of principles and theory (Wang & Odell, 2002).

RESEARCH METHODS

Selection of participating teacher researcher teams for case studies

Larry and Shelley were responsible for facilitating the action research of six suburban teams in two school districts and one urban team in southern Ontario, and of two urban teacher teams in a northern Ontario school district in 2007-2008. They are researchers and teacher educators in literacy education at an Ontario faculty of education. Cathy is a mathematics education researcher and teacher educator at the same institution. Jane is a curriculum consultant seconded by ETFO from a southern Ontario school board to lead the *Teachers Learning Together* project. Cathy, Larry and Shelley supported the action research of eight teams in a suburban school board in southern Ontario and two teams in a rural school board in northern Ontario in 2008-2009. Rural, suburban and urban teams participated in the *TLT* project, but we were matched with primarily urban and suburban teams because of OISE/University of Toronto's location in a large urban area.

From the 19 teams with which Cathy, Larry and Shelley worked, the three of us selected four teams as participants in this case study research in 2007-2008 and three of the 2008-2009 teams. Our selection was based on having as varied a representation of the 19 teams as possible. We selected one team from each of the school districts with which we worked (three in the first year and two in the second year). First-year case study teams were selected from two suburban districts and from the northern district. As the majority of teams explored language arts related topics in their action research, we selected three teams that had a language arts focus and one that had a music focus. The second-year teams were selected for geographic reasons and for the range of perspectives that they represented. One of the suburban teams was comprised of French Immersion teachers, and another team had a large English Language Learner

student population. The third team provided a rural northern perspective. Teachers participating in the case studies had been teaching between two and 23 years, with the majority having taught between 5-10 years.

In the first year, the action research questions addressed language arts and music topics. Second year teams' research questions centered on the problem solving and communication strands of the Ontario Mathematics curriculum (Ontario Ministry of Education, 2005). Many participants identified the Education Quality and Accountability Office (EQAO) provincial tests and school goals (which are often based on EQAO test results) as reasons for their choice of research topics. They noted that problem solving was an area that they needed to work on in their teaching and felt that their students were not able to communicate their mathematical thinking effectively.

The teams are as follows:

2007-2008

Reading Elementary Team (northern urban district school in low socioeconomic neighborhood with Aboriginal and European students): male teachers in grades 4 and 5, female grade 6 teacher and their school principal.

Reading Comprehension Elementary Team (southern suburban district in mixed socioeconomic neighborhood with large population of English Language Learners): female grade 3, grade 5 and ELL teacher in one school.

Research Middle School Team (same southern suburban district as Reading Comprehension Elementary with similar student population): one male and two female grade 8 language arts teachers and a special education teacher.

Music Leadership Team (another southern suburban district with many high socioeconomic communities and mixed SES communities, many with large ELL student populations): a male music consultant, four female music teachers and one male music teacher working in schools from across the entire school district.

2008-2009

French Immersion Team (same southern suburban district as Music Leadership Team in high SES neighborhood): one grade 4 teacher and two grade one teachers in one French Immersion school and a grade 7 French Immersion teacher in a dual-track school in high SES neighborhood. One of the grade one teachers was the team leader.

RIDE Team (same southern suburban district in mixed SES neighborhood with large ELL student population): one grade 5/6 teacher (lead teacher), two grade 3 teachers, two grade 1 teachers and the school's principal and vice-principal. Please note that RIDE is an acronym for the problem-solving process that the team created: Read it; Imagine and Plan it; Do it; Explain it.

Rural Team (another northern rural district in a town with low to middle socio-economic status and mixed Aboriginal and European student population): a grade 5/6 teacher, the team leader, and the grade 2 teacher and kindergarten teacher in her school.

Data collection and analysis

Classroom observations, semi-structured interviews, focus groups, meeting minutes, action research teams' proposals, interim and final research reports, and reflections on our interactions with teachers served as data sources. Together, the data provide a rich description of the seven teams in our collective case study (Stake, 2000). Because of the distance involved in traveling to interview teachers face-to-face multiple times, a research assistant conducted telephone interviews in November with all participating teachers and school administrators (see Appendix A for November interview questions). Interviews were tape recorded and transcribed by the research assistant.

We wrote non-verbatim minutes of face-to-face and teleconference meetings held with each of the teams. In addition, we conducted half-day classroom observations of each teacher's instruction stemming from their action research. We followed up our observations by asking teachers about their goals for their teaching and how well they felt they were met. A research assistant conducted focus groups during the classroom observation visits in late April (see Appendix B for April Focus Group Questions). She tape recorded and transcribed the focus group discussions.

The action research teams were required to write proposals with a preliminary statement of their research purpose, the teaching methods they proposed to try and what they hoped to achieve through their action research. They also wrote interim reports that included their research question, a project rationale and overview of teaching and data collection methods. Teachers identified emerging findings in describing the impact of their research on their students' learning and on their professional growth and wrote feedback to ETFO on their successes and anticipated needs to continue with their research. Final reports included the research findings, impact and implications of the research initiative on student learning and on the participating teachers' learning, as well as next steps for classroom teaching and further research. These documents provided specific information concerning teachers' learning about their teaching practices and about action research.

The university-based research team used a constant-comparison data analysis method (Creswell & Plano-Clarke, 2007) as the study proceeded. Codes were modified as we talked about our interpretations of the data, and identified key quotations and examples to illustrate the themes that arose in this process. We continued to shape the themes until we reached consensus.

THE MANY TYPES OF MENTORING IN THE TEACHERS LEARNING TOGETHER PROJECT

Federation mentoring: Materials and meetings

In the initial conceptualization of the *Teachers Learning Together* project, ETFO staff identified the layers of support needed to ensure opportunities for teachers to grow in their understanding of content, pedagogy and action research. They continually revisited the structures and processes, altering or enhancing them, based on feedback from university facilitators or teachers. ETFO staff supported the team leads and teacher teams in carrying out the logistics of the project through emails, telephone conversations, personal visits and regional meetings. These structures and processes were introduced to the participating members at an introductory symposium.

At the introductory symposium held in August at the beginning of each year of the *TLT* project, ETFO staff and university facilitators met with the lead teachers to provide an overview of the project and to discuss the role of the lead teachers. Later in the day, all teachers were introduced to the project and participated in a workshop that helped them to understand action research as a process defined by seven stages: ponder and pose the inquiry question, plan the action and review the research, pursue the plan, prepare and collect the data, peruse the data for patterns, present the findings, pause, reflect and plan again (Elementary Teachers' Federation of Ontario, 2008, p. 11). The teachers' federation staff also provided mentorship through the creation of an action research resource binder. The university facilitators reviewed and made suggestions for adding or revising material in the binder.

Teachers reported that they used some chapters in the action research binder extensively. These included an introductory chapter outlining the roles and responsibilities of teachers, university facilitators and ETFO staff, together with a discussion of what action research is and is not, information about writing ethics protocols and a sample parent permission letter. Another chapter provided prompts and guidelines for narrowing the research focus. We drew on this chapter in our face-to-face meetings at the schools of each of the teams with whom we worked. These meetings took place in the final week of September and early weeks of October of each year. A subsequent chapter included questions for determining appropriate research to include in a literature review, instructions for using EBSCO, an education research database and examples of the use of APA referencing style.

The two most frequently consulted chapters contained data collection and analysis tips, templates and examples of numerous types of observational, statistical, survey, interview, and reflective journal data sources.

At the whole group meeting, which took place at the University in November of each year and during the team's spring telephone or face-to-face meetings,

Cathy, Larry and Shelley drew teachers' attention to these chapters. The final chapter contained templates for the interim and final reports of the teacher teams' action research. The three university facilitators introduced teachers to the templates at the August symposium when we first met our teams.

University faculty and peer mentoring (discussed in terms of teachers' learning)

In this study, the role of university mentors involved supporting the educators in their action research projects. Cathy, Larry and Shelley answered questions, offered feedback about the structure of the research projects, listened to their discussions and assisted them in exploring some of the complexities and challenges of conducting action research. Ensuring teacher ownership of the research process was a critical piece in our mentorship role.

The teachers mentored each other in their teaching, as well. One participant talked about the fluid nature of peer mentoring within the collaborative action research groups:

> Through our work in this project we support each other and become each other's mentors. I think we mentor at different points in our discussions and the research process, depending on what we are exploring or discussing. Sometimes, I think we mentor without even knowing it. It is integrated into the collaborative nature of this project. (Project Meeting # 3, January 20, 2009)

We present evidence of teachers' learning in terms of their professional and action research understandings and practices, showing how mentoring roles were shaped according to teachers' changing needs.

Teachers' learning about professional practice

In the first year, all teachers found that their action research provided "a new perspective" on practices they had been conducting in the past or confirmed hypotheses or beliefs about effective teaching that they had held. In this respect, they agreed that their teaching had not changed significantly. What had changed was the systematic gathering of information about their students' learning to address their research questions. Teachers used the research data for teaching and reporting purposes, in addition to using it for their research. Reading Elementary teachers, for example, used their anecdotal observations of their students' silent reading and engagement with texts to inform students about their progress and to inform parents in parent-teacher conferences.

Larry and Shelley were knowledgeable in the field of literacy and had ready access to attitude surveys, articles and resource books on silent reading, reading comprehension and other topics related to the teams' action research. Our mentoring took the form of making suggestions and introducing teachers to new approaches and resources. A similar mentoring relationship occurred in the second year as Cathy, the math specialist facilitator worked with four

of the teacher teams and responded to questions that the literacy specialist facilitators brought from meetings with their teacher teams. We did not have a similar level of expertise to guide the music leadership team in the first year, however. The team included a music consultant who provided the mentoring role in music education that we were unable to fill.

Across the four teams participating in the first year of the TLT initiative, all teachers spoke authoritatively about the new learning they had gained. They confidently explained why certain practices worked well and what did not work so well. They developed personal principles and theories to explain why the practices were successful: students must have a purpose for their reading and something to do with the new knowledge they gain through reading; and when teaching the same lesson to different groups of students, the lesson is bound to change because the children come to the class with different ways of learning – it is not a lack of consistency on the part of the teacher. Our mentoring included talking about these principles and understandings at meetings and asking questions to guide teachers' thinking when giving feedback on drafts of teachers' final reports.

In contrast, the action research project provided the impetus for teachers in the second year to try something that they might not otherwise have thought they could do. A handful had participated in school district professional development workshops, or the beginning levels of the mathematics additional qualifications courses (a series of three professional development courses of 100 contact hours each, supported by the Ontario College of Teachers, leading to the designation of math specialist). These teachers were the lead teachers on the teams who served as mentors by introducing colleagues to resources and new teaching ideas.

Although many teachers participating in the second year of the research project experienced apprehension about trying something new in a discipline that was not their area of strength, they carried on in spite of disappointments that arose when their teaching approaches were not working as they had anticipated. They found that involvement in the TLT project gave them a starting point for figuring out the solutions to mathematics problems alongside their students and for trying teaching new practices. Mentoring in mathematics content and methods came from Cathy and from Jane and her ETFO colleagues, who had been mathematics coordinators in their school boards before being seconded to work for the teachers' federation. They provided free teaching resources to all participating teachers and attended the whole-group meeting in November to provide additional support to teachers. Because of many teachers' unease in teaching mathematics, a very important mentoring role taken up by ETFO staff, university facilitators and more experienced and confident colleagues was that of an encouraging colleague. We highlighted the professional growth we were observing, and encouraged teachers to look at the evidence of students' learning in the data they were gathering in their classrooms.

Most teachers participating in the second year of the project talked about the transformations that had occurred in their teaching, particularly mathematics teaching, as a result of their action research. One teacher from the French Immersion team explained in a focus group that her teaching had "changed dramatically in the sense that I model more in math . . . I thought I was a great math teacher before because I'm a math specialist and I love math, but now I'm looking back and I'm thinking that I've really learned a lot and am a much better teacher now." Many teachers in the second year gave specific examples of the changes they had made, with the most common change being a move from more teacher-directed instruction to using more interactive teaching methods where students talked and learned from each other.

Across the two years, all teachers brought their experience and professional knowledge to their teams as they worked together to solve problems that arose throughout the action research process. In this respect, the collaboration that teachers in both years felt was at the heart of the success of the research, invited informal and spontaneous mentoring among colleagues. The opportunity to work within a team, the necessity to plan and to share ideas together, and the commitment to build a sense of community were fundamental to the professional growth experienced in the TLT project.

Teachers' learning about collaborative action research

The university facilitators' greatest contribution to teachers' professional growth was in the area of understanding the potential of collaborative action research for professional growth and for enhanced student learning. A teacher from Research Middle School participating in the first year of the project commented in a focus group discussion: "University faculty helped us focus and provided new direction when we seemed to be floating along without any real direction." Another teacher from Reading Elementary, a team participating in the first year of the project said, "The best times of my own professional learning have been the times when I've been meeting with our facilitators. They let us know how we were doing because we had no concept of how we're doing as researchers." This was a common need of teachers in both years — affirmation that teacher teams were "on the right track" with their research (voiced by a teacher on the RIDE team in the second year).

The teachers in all but one team had no prior experience with action research, so they drew heavily on the expertise and experience of the university mentors and consulted the action research resource that the ETFO staff had created. Yet, underpinning all of our mentoring was a desire to foster a sense of the teacher teams' ownership of their research. Larry, Cathy and Shelley assisted teachers when they indicated a need, but emphasized that teachers were the drivers of their own inquiry. Teams participating in the first year of the project required greater assistance in forming research questions and analyzing data than did the second year teams, who had narrowed their research focus at the

initial in-service meeting in August. The four teams participating in the first year of the project continued to define a research question after our meetings with them in October, with the Music Leadership Team forming its question in November. When working with these teachers, Shelley's and Larry's role began as an advisory one; helping the teams refine their research questions, teaching and data collection methods in the first three months, to a supportive one; reassuring teams that they were on track, validating what they were doing, and rejuvenating them when they felt that the demands of teaching and carrying out action research were overwhelming. Teachers participating in the second year of the TLT project did not ask for this type of reassurance. Perhaps the narrowed parameters for the action research topics helped teachers to focus their research purposes more readily or perhaps we were better at assisting them in defining their research purpose because of the university facilitators' experiences in the first year. In addition, ETFO had a complete action research binder (Elementary Teachers' Federation of Ontario, 2008) prepared for teachers before they began the research in the second year. The binder was being developed as the project progressed in the first year. The previous experiences of the teachers and their personalities may have contributed to this difference in needing reassurance from university facilitators, as well.

Although all teams viewed action research as a process that provided a focus for their teaching and an opportunity for reflecting on their teaching, the professional learning was only part of what action research meant to the teachers participating in the first year of the project. These teachers also saw action research as a process that brought new learning to the field, as well as personal learning. They felt well positioned to carry out meaningful classroom-based research. A teacher from Research Middle School explained, "We're on the front lines. As teachers, we have a greater understanding of how kids learn than any academic sitting in his office writing papers; [someone] who hasn't been in a classroom for fifteen years." It can be argued that this middle school teacher believed that university researchers were knowledgeable and authoritative regarding research methods and disciplinary knowledge, but lacked the insider perspective and practical understanding needed to interpret the research data with the deep understandings characteristic of many classroom teachers. Cathy, Shelley and Larry all have extensive elementary classroom teaching experience and thus are both insiders who bring classroom experience to our interpretations of classroom data and outsiders who bring broader perspectives beyond the classroom context, Like the middle school teacher, we greatly respect teachers' practical knowledge and were pleased that teachers positioned themselves as authoritative in carrying out classroom research. We believe that part of our mentoring role was to provide space for teachers to take ownership of their research and to foster teachers' view of classroom-based research as an avenue for professional learning

MENTORING EXPERIENCED TEACHERS

The evidence of teachers' professional learning presented in this paper underscores Weasmer and Woods's (1999) assertion that although mentoring relationships among veteran teachers are less common than the mentoring of less experienced teachers by more experienced school-based, district-based or university-based educators, these relationships should be fostered because they provide rich learning opportunities. Collaborative action research provided this opportunity for colleagues to learn from and alongside each other. As outlined by Capobianco (2007), the collaborative action research involved teachers trying a new teaching strategy and then either observing each other teach or reflecting together on their teaching. After the lesson, the educators mentored each other by providing feedback and sharing insights, sometimes conscious of how they were providing mentorship and other times unaware of the mentoring roles they were taking up. Because the teachers did not formally position themselves as mentors, but instead as co-researchers, the relationship varied from that of a peer coaching relationship (Gottesman, 2000). Participating teachers turned to their colleagues for support and clarification when they felt unsure about a specific area of teaching, but they did not solely focus on improving their teaching by providing feedback to each other. In addition to peer feedback, they also relied on the data they were gathering from all team members' classrooms to examine collectively the influence of the new teaching approach on student learning.

A unique feature of the TLT initiative was the leadership role of the teachers' federation. Unlike many collaborative action research endeavors that are initiated by university faculty, ETFO staff invited university faculty to take part in the TLT project. In addition, ETFO established the parameters for teachers' and university researchers' participation. They also created the administrative structures that gave each participating teacher four release days to work with her/his action research team. Because of this relationship and because ETFO provided the source of funding, there was a great sense of teacher leadership. Teachers felt accountable to themselves and to ETFO when completing their research, rather than to university faculty, who served more as consultants than as traditional researchers. The ETFO staff, thus, acted as mentors in terms of modeling teachers in leadership roles and in creating a context where teachers felt ownership of their professional learning.

Another key aspect of the mentoring was the variability and flexibility of the university faculty mentoring. In accord with Avgitidou's (2009) conclusions about efficacious roles and processes of facilitators in collaborative action research, Larry, Shelley and Cathy played many roles in. in support of the teachers' collaborative action research: provider of materials and ideas, voice of experience, listener and questioner as teachers reflect on observations and other classroom data, reassuring overseer, promoter of teachers as researchers, and door opener to new and bigger challenges (e.g., further research, publishing

results, presenting to colleagues). Our roles did not play out in a sequential order; many were at play throughout the process, though some became more prominent at certain points in response to teachers' needs. These needs appeared to be greatly dependent on teachers' comfort levels with their action research topics and research purposes. We observed that teachers in the first year of the project experienced the greatest growth in their understandings of and views of themselves as action researchers. Teachers in the second year experienced transformations in their understandings of effective teaching and in their teaching practices.

The TLT initiative brought together two powerful mentoring relationships — collegial mentoring and university faculty mentoring. The additional layer of the teachers' federation made the TLT project a fruitful context for mentoring experienced teachers as they learned about their teaching and about collaborative action research as an avenue for professional learning. The mentoring took place in interactions between teachers and their colleagues, between teachers and university faculty, and between teachers and ETFO staff. The collaborative nature of the EFTO projects provided opportunities for educators to mentor each other as they explored different aspects of their research. This supportive learning community encouraged teachers' risk-taking, an improved sense of efficacy, and in some cases even a transformation of attitudes and teaching practices.

Teachers Learning Together is a promising model for mentoring, leading to experienced teachers' professional growth, but it is a resource-intensive project in its present form. The next challenge is to expand this model so that greater numbers of teachers can benefit from the professional learning opportunities through multiple layers of mentoring. Partnerships between faculties of education, school districts, teacher federations and/or ministries of education will be needed to reconfigure the model so it is sustainable over larger groups of teachers and over extended periods of time.

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REFERENCES

Avgitidou, S. (2009). Participation, roles and processes in a collaborative action research project: A reflexive account of the facilitator. *Educational Action Research 17*(4), 585-600.

Bruner, J. (1990). *Acts of meaning.* Cambridge, MA: Harvard University Press.

Capobianco, B. M. (2007). Science teachers' attempts at integrating feminist pedagogy through collaborative action research. *Journal of Research in Science Teaching, 44*(1), 1-32.

Cherian, F. (2007). Learning to teach: Teacher candidates reflect on the relational, conceptual, and contextual influences of responsive mentorship. *Canadian Journal of Education, 30*(1), 25-46.

Connelly, M., & Clandinen, J. (1999). *Shaping a professional identity: Stories of educational practice*. New York: Teachers College Press.

Cotton, K. (2004). *New small learning communities: Findings from recent literature*. Portland, OR: Northwest Regional Education Laboratory.

Creswell, J. W., & Plano-Clark, V. (2007). *Designing and conducting mixed methods research.* Thousand Oaks: Sage.

DuFour, R. (2004). What is a professional learning community? *Educational Leadership, 61*(8), 6-11.

Feiman-Nemser, S. (2001). Helping novices learn to teach: Lessons from an experienced support teacher. *Journal of Teacher Education, 52*(1), 17–30.

Gottesman, B. (2000). *Peer coaching for educators*. Lanham, ML: Scarecrow Press.

Hubbard, R. S. & Power, B. M. (1999) *Living the questions: A guide for teacher-researchers.* Portland, ME: Stenhouse.

Huffman, J. B., & Hipp, K.K. (2003). *Professional learning communities: Initiation to implementation*. Lanham, MD: The Scarecrow Press.

McCann, T. M., & Johannessen, L.(Eds.). (2009). Mentoring matters: Working with student teachers. *English Journal, 99*(1), 114-117.

McIntyre, J., & O'Hair, M. (1996). *The reflective roles of the classroom teacher.* Belmont, CA: Wadsworth.

McNiff, J. (2001). *Action research principles and practice* (2nd ed.). New York: Routledge Falmer.

Ontario Ministry of Education. (2005). *Mathematics: The Ontario curriculum grades 1-8*. Toronto: Queens' Printer for Ontario.

Stake, R. (2000). Case studies. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 435-454). Thousand Oaks, CA: Sage Publications.

Vygotsky, L. S. (1986). *Thought and language*. Cambridge, MA: MIT Press.

Walkington, J. (2005). Mentoring preservice teachers in the preschool setting; Perceptions of the role. *Australian Journal of Early Childhood, 30*(1), 28-35.

Wang, J., & Odell, S. J. (2002). Mentored learning to teach according to standards based reform: A critical review. *Review of Educational Research, 72*(3), 481-546.

Weasmer, J., & Woods, A. M. (1999). Peer partnering for change. *Kappa Delta Pi Record, 36*(1), 32-34.

Zwart, R. C., Wubbels, T., Bergen, T. C., & Bolhuis, S. (2007). Experienced teacher learning within the context of reciprocal peer coaching. *Teachers and Teaching, 13*(2), 165-187.

APPENDIX A: NOVEMBER INTERVIEW QUESTIONS

1. What drew you to participating in the Teachers Learning Together (TLT) project?
2. What are you expecting that your TLT team will accomplish and what benefits do you see in doing the action research collaboratively?
3. What challenges do you think you will experience from the TLT project?
4. What experiences do you already have with action research?
5. How would you explain what action research is to another teacher?
6. What experiences do you already have collaborating with members of this team? With others?
7. How do you hope this project will help you as a math teacher?
8. How was your team put together?
9. What is your background in mathematics? In mathematics education?
10. How did you choose your research topic?
11. What kind of help do you feel you will need to carry out this research?

APPENDIX B: APRIL FOCUS GROUP QUESTIONS

1. What is your overall assessment of the Teachers Learning Together (TLT) in-service experience?
2. Which aspects of the TLT project were most helpful for your learning?
3. Which aspects of the TLT project inhibited your learning?
4. What were your expectations for the TLT project and how have they been met?
5. Describe how decisions were made in your team.
6. How has your understanding of _____ (the issue in focus for the project) changed?
7. What factors influenced your shifts in understanding?
8. How has your teaching changed? What factors have influenced your shifts in teaching?

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